Randy Dutton
R D Finishing, Inc.
2405 Oakland Avenue
Elkhart, IN 46517

Re: Registered Operation Status,
039-13674-00393

Dear Mr. Dutton:

The registration renewal application from R D Finishing, Inc. received on December 27, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following surface coating operation, located at 2405 Oakland Avenue, Elkhart, Indiana, is still classified as registered:

(a) One (1) surface coating process for wood furniture and miscellaneous wood parts, with a maximum of two (2) high volume low pressure spray guns exhausting through one (1) vent identified as RDSV#2 (height 25 feet; flowrate: 14,500).

The exhaust from the spray area will pass through a dry filter bank before discharge.

(b) One (1) natural gas boiler with 112,000 Btu/hour heat input rate.

(c) One (1) natural gas radiant heater with 200,000 Btu/hr heat input rate.

The following conditions shall be applicable:

1. Pursuant to 326 IAC 2-6 (Emission Reporting), this source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than (ten (10) tons per year for Elkhart County of VOC. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

2. Pursuant to 326 IAC 5-1 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

   (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

   (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60,

Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

3. Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coatings applied to wood furniture and/or wood components shall utilize one or more of the following application methods:

Airless Spray Application
Air-Assisted Airless Spray Application
Electrostatic Spray Application
Electrostatic Bell or Disc Application
Heated Airless Spray Application
Roller coating
Brush or Wipe Application
Dip-and-Drain Application

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

Low pressure air atomization spray application is used, this method complies with the requirement.

4. Pursuant to 326 IAC 6-3-2 (Process Operations), the particulate matter (PM) from the surface coating operation shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dry filter banks shall be in operation at all times the surface coating is in operation, in order to comply with this limit.

5. An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015

no later than March 1 of each year, with the annual notice being submitted in the format attached. This registration is a registration renewal issued to this source. The source may operate according to 326 IAC 2-5.5.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

ERG/RB

cc: File - Elkhart County
Elkhart County Health Department
Air Compliance - Greg Wingstrom - Northern Regional Office
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Registration

This form should be used to comply with the notification requirements under 326 IAC 2-5.5-4(a)(3).

Company Name:	**R D Finishing, Inc.**
Address:	**2406 Oakland Avenue**
City:	**Elkhart, Indiana**
Authorized individual:	**Randy Dutton**
Phone #:	**(219) 294-5126**
Registration #:	**039-13674-00393**

I hereby certify that R D Finishing is still in operation and is in compliance with the requirements of Registration 039-13674-00393.

Name (typed):	
Title:	
Signature:	
Date:	

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Registration Renewal

Source Background and Description

Source Name:	R D Finishing, Inc.
Source Location:	2405 Oakland Avenue, Elkhart, Indiana 46517
County:	Elkhart
SIC Code:	2499/2599
Operation Permit No.:	039-13674-00393
Permit Reviewer:	ERG/RB

The Office of Air Quality (OAQ) has reviewed an application from R & D Finishing, Inc. relating to the renewal of the registration of a surface coating operation.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) One (1) surface coating process for wood furniture and miscellaneous wood parts, with a maximum of two (2) high volume low pressure spray guns exhausting through one (1) vent identified as RDSV#2 (height 25 feet; flowrate: 14,500).

The exhaust from the spray area will pass through a dry filter back before discharge.

(b) One (1) natural gas boiler with 112,000 Btu/hour heat input rate.

(c) One (1) natural gas radiant heater with 200,000 Btu/hr heat input rate.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) Registration 039-5818-00393, issued on September 25, 1996;

All conditions from previous approvals were incorporated into this permit. Note, the sanding room was removed from the facility's registration as all the furniture is hand sanded (no power equipment is used in this operation). The small amount of PM generated in this process is vacuumed up with a small shop vac. There are no emissions to the atmosphere.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
1	Surface Coating	25	2	14,500	70

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on December 27, 2000.

Emission Calculations

See Appendix A of this document for detailed emissions calculations in Appendix A, pages 1 through 4).

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	1.9
PM-10	1.9
SO_2	0.0
VOC	13.9
CO	0.03
NO_x	0.1

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all criteria pollutants are less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

(c) The potential to emit as defined in 326 IAC 2-7-1 (29) of VOC is less than 25 tons per year, but greater than 5 tons per year, therefore the source is subject to the provisions of 326 IAC 2-5.

Actual Emissions

No previous emission data has been received from the source.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	maintenance
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Elkhart County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	0.02
PM10	0.02
SO_2	0.00
VOC	13.9
CO	0.03
NO_x	0.1

(a) This existing source is still **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit CP-039-13674-00393, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) R D Finishing, Inc. is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), Subpart JJ. Because they use less than 100 gallons of surface coating material per month.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than (ten (10) tons per year for Elkhart County of VOC. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1(Opacity Limitations)

Except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitaitons), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 8-2-12 (Wood Furniture and Cabinet Coating)

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating) the surface coatings applied to wood furniture and/or wood components shall utilize one or more of the following application methods:

Airless Spray Application
Air-Assisted Airless Spray Application
Electrostatic Spray Application
Electrostatic Bell or Disc Application
Heated Airless Spray Application
Roller coating

Brush or Wipe Application
Dip-and-Drain Application

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

Low pressure air atomization spray application is used, this method complies with the requirement.

State Rule Applicability - Individual Facilities

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the surface coating operation shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The dry filter banks shall be in operation at all times the surface coating is in operation, in order to comply with this limit.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

The surface coating will emit less than 10 tons per year of a single HAP or 25 tons per year of a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply.

326 IAC 8-1-6 (New Facilities - General Reduction Requirement)

This source does not have potential VOC emissions equal to or greater than twenty five (25) tons per year, therefore this source is not subject to the provisions of 326 IAC 8-1-6.

Conclusion

The operation of this surface coating facility shall be subject to the conditions of the attached registration renewal 039-13674-00939.

Appendix A: Emissions Calculations - Summary

Company Name: **R D Finishing, Inc.**
Address City IN Zip: **2405 Oakland Avenue, Elkhart, Indiana 46517**
CP: **039-13674**
Plt ID: **039-00393**
Reviewer: ERG/RB
Date: January 12, 2001

	Pollutants Tons/Year					
Process	PM*	PM10*	SO2	NOx	VOC	CO
Combustion	0.02	0.02	0.00	0.14	0.01	0.03
Surface Coating	1.83	1.83			13.90	
Total	**1.85**	**1.85**	**0.00**	**0.14**	**13.91**	**0.03**

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
3-10 MM BTU/HR
Small Industrial Boiler

Company Name: **R D Finishing, Inc.**
Address City IN Zip: **2405 Oakland Avenue, Elkhart, Indiana 46517**
CP: **039-13674**
Plt ID: **039-00393**
Reviewer: ERG/RB
Date: January 12, 2001

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.3	2.7

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	12.0	12.0	0.6	100.0 **see below	5.3	21.0
Potential Emission in tons/yr	0.02	0.02	0.00	0.14	0.01	0.03

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions

Company Name: **R D Finishing, Inc.**
Address City IN Zip: **2405 Oakland Avenue, Elkhart, Indiana 46517**
CP: **039-13674**
Plt ID: **039-00393**
Reviewer: ERG/RB
Date: January 12, 2001

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	2.870E-06	1.640E-06	1.025E-04	2.460E-03	4.646E-06

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	6.833E-07	1.503E-06	1.913E-06	5.193E-07	2.870E-06

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations
VOC and Particulate
From Surface Coating Operations

Company Name: **R D Finishing, Inc.**
Address City IN Zip: **2405 Oakland Avenue, Elkhart, Indiana 46517**
CP: **039-13674**
Plt ID: **039-00393**
Reviewer: ERG/RB
Date: January 12, 200

Material	Density (Lb/Gal)	Weight % Volatile (H20 & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Low HAPs Resistovar - Sealers	7.6	68.87%	0.0%	68.9%	0.0%	22.00%	0.25000	1.250	5.25	5.25	1.64	39.36	7.18	0.81	23.85	75%
Low HAPs Resistovar - Top Coat	7.9	62.06%	0.0%	62.1%	0.0%	30.00%	0.25000	1.250	4.88	4.88	1.52	36.58	6.68	1.02	16.26	75%
Low HAPs Resistovar - Catalyst	9.3	36.60%	0.0%	36.6%	0.0%	47.00%	0.00700	1.250	3.39	3.39	0.03	0.71	0.13	0.06	7.21	75%
Cleaning Solvent - Acetone	6.6	100.00%	0.0%	100.0%	0.0%	0.00%	0.00500	0.125	6.64	6.64	0.00	0.10	0.02	0.00	ERR	0%
PS1105	6.6	100.00%	0.0%	100.0%	0.0%	0.00%	0.00500	0.125	6.59	6.59	0.00	0.10	0.02	0.00	ERR	0%
State Potential Emissions			**Add worst case coating to all solvents**								**3.17**	**76.14**	**13.90**	**1.83**		

METHODOLOGY

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) *(8760 hrs/yr) *(1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)
Total = Worst Coating + Sum of all solvents used